

Title (en)
IMAGING SYSTEM

Title (de)
ABBILDUNGSSYSTEM

Title (fr)
SYSTEME D'IMAGERIE

Publication
EP 1788946 A4 20091104 (EN)

Application
EP 05790927 A 20050912

Priority
• NZ 2005000239 W 20050912
• US 60875104 P 20040910

Abstract (en)
[origin: WO2006028396A1] An imaging system (100) for generating a three-dimensional image of a body part of a patient (102). The imaging system (100) comprises a sensor head (101) that is moved relative to the patient by a robot (103) to conduct a scan of the body part. The sensor head (101) comprises a three-dimensional profiler that is arranged to obtain surface profile information and a radar device that is arranged to obtain radiation information at frequencies of at least approximately 10GHz at multiple scan locations defining a synthetic aperture relative to the body part. The imaging system (100) has a control system that is arranged to operate the three-dimensional profiler and radar device. The control system also receives and processes the radiation information and surface profile information to generate a three-dimensional image of the body part that has multiple image points by synthetically focusing the radiation information.

IPC 8 full level
A61B 5/05 (2006.01); **G01S 13/02** (2006.01); **G01S 13/90** (2006.01)

CPC (source: EP US)
A61B 5/05 (2013.01 - EP US); **A61B 5/0507** (2013.01 - EP US); **A61B 5/1077** (2013.01 - EP US)

Citation (search report)
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• [A] US 6061589 A 20000509 - BRIDGES JACK E [US], et al
• [A] WO 03003907 A2 20030116 - WISCONSIN ALUMNI RES FOUND [US]
• [A] US 2002130804 A1 20020919 - MCMAKIN DOUG L [US], et al
• [X] FEAR E C ET AL: "Microwave System for Breast Tumor Detection", IEEE MICROWAVE AND GUIDED WAVE LETTERS, IEEE INC, NEW YORK, US, vol. 9, no. 11, 1 November 1999 (1999-11-01), XP011035499, ISSN: 1051-8207
• [A] GANG WANG ET AL: "Impact of dispersion in breast tissue on high-resolution microwave imaging for early breast tumor detection", ANTENNAS AND PROPAGATION SOCIETY SYMPOSIUM, 2004. IEEE MONTEREY, CA, USA JUNE 20-25, 2004, PISCATAWAY, NJ, USA, IEEE, vol. 3, 20 June 2004 (2004-06-20), pages 2452 - 2455, XP010721881, ISBN: 978-0-7803-8302-9
• [A] FEAR, ELISE C.; STUCHLY, MARIA A.: "Microwave detection of breast tumors: comparison of skin subtraction algorithms", PROC. SPIE, vol. 4129, 1 August 2003 (2003-08-01), pages 207 - 217, XP002535148
• See references of WO 2006028396A1

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK YU

DOCDB simple family (publication)
WO 2006028396 A1 20060316; EP 1788946 A1 20070530; EP 1788946 A4 20091104; US 2007060816 A1 20070315;
US 2009024026 A9 20090122

DOCDB simple family (application)
NZ 2005000239 W 20050912; EP 05790927 A 20050912; US 22454505 A 20050912